

Pure stands of mid- and short-grasses are characteristic of the tighter soils. Since high scaled quail populations are associated with shrub cover, these grasslands rank far below sandsage-yucca ranges in carrying capacity for scaled quail. Cover types on the Carrizo District are shown in Figure 2.

In spite of wind erosion problems that are further aggravated by widely fluctuating annual precipitation (Fig. 5), Baca County is primarily a farming county.

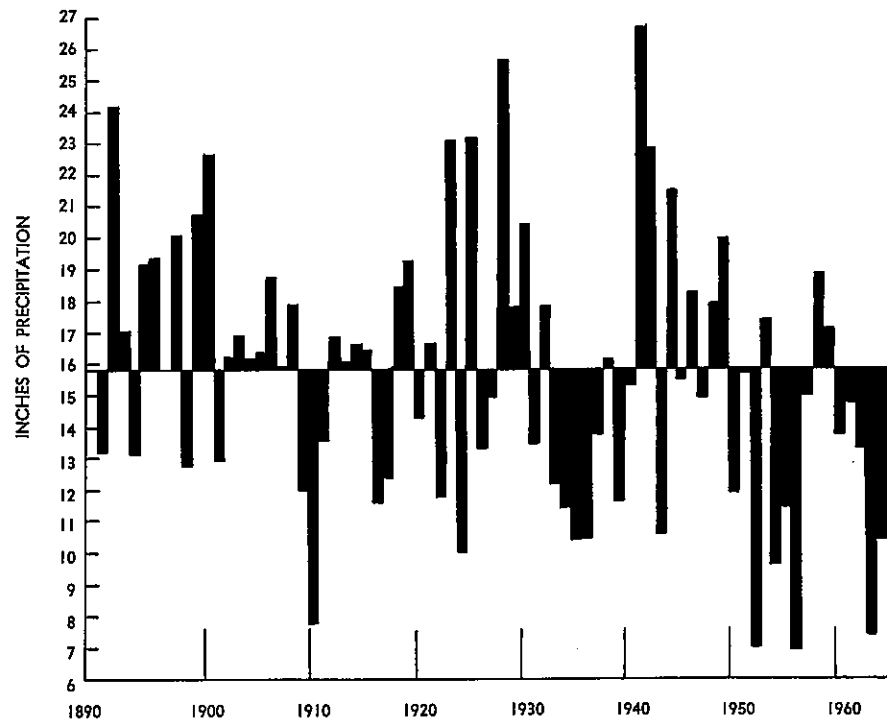


FIG. 5. A 75-year record showing precipitation departures from the annual mean in central Baca County.

Broom corn (*Sorghum vulgare*), which responds rapidly to any available moisture, is the major crop raised on sandy soils. Grain sorghums (*Sorghum vulgare*) and wheat (*Triticum aestivum*) are also planted.

Many of the cultivated fields and farms were placed in the Conservation Reserve Program established by the Federal Government during the late

1950's. These deferred "Soil Bank" acreages for the most part contained sunflowers (*Helianthus sp.*), thistles (*Salsola kali*), and other annual and perennial forbs. Where conscientious efforts were made to reestablish grass, the transition to grass was quite evident during the study period.

### A CLIMATE OF EXTREMES

Ever changing precipitation patterns and amounts, annual temperature extremes, and variable but persistent winds characterize southeastern Colorado climate. All of these factors affect scaled quail, either directly or indirectly. Spring droughts restrict plant growth and reduce plant carotene — the source of vitamin A needed for reproduction of quail (Lehman, 1952). Summer rains are essential to production of seeds that comprise the main diet of adult quail throughout the year.

Annual precipitation was consistently below the 15-inch average during this 4-year study (Fig. 5). Repetitious spring droughts, which were outstanding climatic features (Fig. 6), apparently did not restrict reproduction of

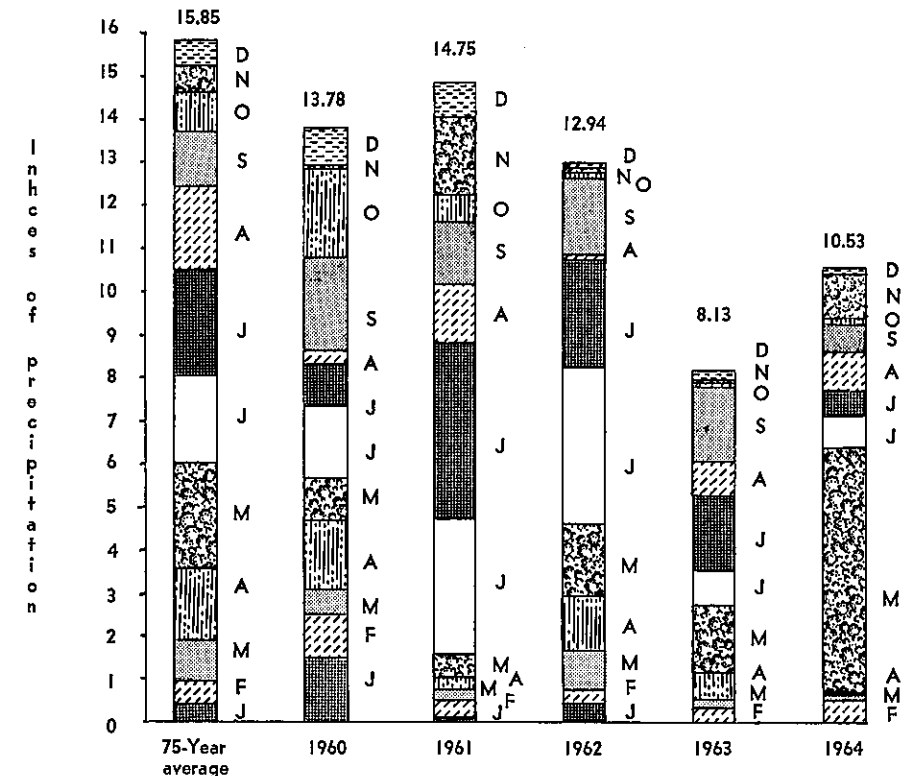


FIG. 6. Monthly precipitation (recorded 8 miles south of Springfield, Colorado in comparison to the 75-year average).